

[Please replace the paragraph, beginning at page 9, line 28 with the following rewritten paragraph:

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G4 --FIGURE 5 shows the results for 34 normal human serum samples from healthy subjects which were assayed both by the present wPTH IRMA and the above I-PTH assay. In every case, the level of wPTH detected by the IRMA is lower than that reported by the I-PTH assay, demonstrating the ability of the present IRMA to avoid detecting the interfering large, non (1-84) PTH fragments detected by the I-PTH assay. FIGURES 6A and 6B illustrate how such interference can occur. An N-terminal PTH specific signal antibody which is not specific to the initial PTH peptide sequence, as in the present invention, can detect not only wPTH (as in FIGURE 6A), but also can detect large, non (1-84) PTH fragments (as in FIGURE 6B).--

[**In the Claims:**

Please replace pending claims 25, 29, 37, 42, 44, 46, 49 and 51 with the following claims 25, 29, 37, 42, 44, 46, 49 and 51:

G5 1/25 (Amended) A substantially pure antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion with said antibody.

G6 5/29 (Amended) A method for measuring an amount of whole parathyroid hormone in a sample comprising:

a) adding to a sample a labeled antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of

VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion to said labeled antibody;

b) allowing said labeled antibody to bind to whole parathyroid hormone present, thereby forming a complex; and

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c) measuring the amount of said labeled complex to measure the amount of whole parathyroid hormone in said sample while not detecting an interfering non-(1-84) parathyroid hormone fragment.

13 37. (Amended) A method for measuring an amount of whole parathyroid hormone in a sample comprising:

a) adding to a sample a first antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion to said first antibody;

b) allowing said first antibody to bind to whole parathyroid hormone present, thereby forming a complex;

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c) labeling said complex by adding a second labeled antibody that specifically binds to a portion of whole parathyroid hormone other than said initial peptide sequence that binds to said first antibody to form a labeled complex; and

d) measuring the amount of said labeled complex to measure the amount of whole parathyroid hormone in said sample while not detecting an interfering non-(1-84) parathyroid hormone fragment.

18 42. (Amended) A method for measuring whole parathyroid hormone by a precipitating or turbidometric immunoassay comprising:

- G8
- a) adding to a sample an antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of an antibody reactive portion of said peptide, said antibody being attached to a colloidal particle or moiety which can be used to detect a signal change;
 - b) allowing said antibody to bind to whole parathyroid hormone present, thereby forming a complex; and
 - c) measuring change in said signal due to the formation of said complex to measure whole parathyroid hormone in said sample while not detecting an interfering non-(1-84) parathyroid hormone fragment.

20 44. (Amended) A kit for assaying for whole parathyroid hormone comprising:

- G9
- a) a substantially pure antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion with said antibody; and
 - b) a labeling component that binds to whole parathyroid hormone, but not to said parathyroid hormone initial peptide sequence VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3).

G10 46. (Amended) A kit for assaying for whole parathyroid hormone comprising:

a) a substantially pure antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion with said antibody; and

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b) a second antibody bound to a solid support and said second antibody is specific for a portion of whole parathyroid hormone that does not include the domain for adenylate cyclase activation.

25 49 (Amended) A method for measuring an amount of a functional N-terminal parathyroid hormone fragment and whole parathyroid hormone in a sample comprising:

a) adding to a sample a first antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion with said first antibody;

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b) adding to said sample a second antibody or antibody fragment specific for a peptide comprising amino acid sequence 28 to 34 of human parathyroid hormone (SEQ ID NO:2), which comprises a domain for protein kinase C activation, wherein at least four amino acids in said peptide sequence are a reactive portion with said second antibody;

c) allowing said first antibody and second antibody, wherein at least one of which is labeled, to bind to N-terminal parathyroid hormone fragment or whole parathyroid hormone present in said sample, thereby forming a labeled complex; and

d) measuring the amount of said labeled complex to measure the amount of said functional N-terminal parathyroid hormone fragment and whole parathyroid hormone in said sample while not detecting an interfering non-(1-84) parathyroid hormone fragment.

7/9 31. (Amended) A method for differentiating between a person having substantially normal parathyroid hormone function and having hyperparathyroidism comprising:

GR a) obtaining a sample from a person to be tested;
b) contacting said sample with a substantially pure antibody or antibody fragment specific for an initial peptide sequence of whole parathyroid hormone wherein said initial peptide sequence consists of VAL-SER-GLU-ILE-GLN-LEU-MET (SEQ ID NO:3), and wherein at least four amino acids in said initial peptide sequence are part of a reactive portion with said antibody; and

c) assessing binding between said substantially pure antibody or antibody fragment and whole parathyroid hormone, if present in said sample, to measure whole parathyroid hormone level in said person, while not detecting an interfering non-(1-84) parathyroid hormone fragment, and to determine if said person has substantially normal parathyroid hormone function or has hyperparathyroidism.